EMC TEST REPORT

Product Name : GSM/GPS Module
Model Name : SIM928A

Prepared for:
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Report Number : UL15820130425CE20-1
Date of Report : 2013-05-14
Date of Test : 2013-04-25~2013-05-10

Notes：
The test results only relate to these samples which have been tested.
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Applicant:	Shanghai SIMCom Wireless Solutions Co.,Ltd.
	Building A,SIM Technology Building,No.633,Jinzhong Road,Changning District,Shanghai R.R.China
Manufacturer:	Shanghai SIMCom Wireless Solutions Co.,Ltd.
	Building A,SIM Technology Building,No.633,Jinzhong Road,Changning District,Shanghai R.R.China
Product Name:	GSM/GPS Module
Brand Name:	SIMCom
Model Name:	SIM928A
Serial Number:	N/A
EUT Voltage:	3.6-4.4V
Date of Receipt:	2013-04-25
Test Standard:	ETSI EN301489-1 V1.9.2
	ETSI EN301489-7 V1.3.1
	ETSI EN301489-3 V1.4.1
Test Result:	Complied
Date of Test	2013-04-25~2013-05-10

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Date of Issue: 2013.5.15

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1. GENERAL INFORMATION

1.1 EUT DESCRIPTION

Product Name:	GSM&GPS module
Model Name:	SIM928A
Hardware Version:	V1.01
Software Version:	SIM900 R11.0
RF Exposure Environment:	Uncontrolled
2G	
Support Band:	GSM900/DCS1800
GPRS Class:	10
Tx Frequency Range:	GSM900:880 ~ 915MHz DCS1800:1710 ~ 1785MHz
Rx Frequency Range:	GSM900:925 ~ 960MHz DCS1800:1805 ~ 1880MHz
Type of modulation:	GMSK
Antenna Type:	external
Antenna Gain:	GSM 900: 3dBi DCS 1800: 3dBi
GPS	
Operation Frequency:	1575.42MHz
Type of Modulation:	BPSK
Antenna Type:	external
Antenna Gain:	2.4dBi

2. TECHNIACL SUMMARY

2.1 SUMMARY OF STANDARDS AND TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below:

EMISSION		
Test Item	**Standard**	**Result**
Conducted disturbance	EN 55022	N/A[1]
Radiated disturbance	EN 55022	N/A[2]
Harmonic current emission	EN 61000-3-2	N/A[1]
Voltage fluctuations & flicker	EN 61000-3-3	N/A[1]

IMMUNITY		
Test Item	**Standard**	**Result**
Electrostatic discharge (ESD)	EN 61000-4-2	P
Radio-frequency electromagnetic field Immunity	EN 61000-4-3	P
Electrical fast transients (EFT)	EN 61000-4-4	N/A[1]
Surges	EN 61000-4-5	N/A[1]
Radio-frequency continuous conducted Immunity	EN 61000-4-6	N/A[1]
Voltage dips and interruptions	EN 61000-4-11	N/A[1]

Note: P means pass, F means failure, N/A means not applicable

Remark1: This EUT is just a radio dependent module without any AC port, DC port and telecommunication/network port. So these tests are not applicable for this EUT.

Remark2: This EUT is just a radio dependent module as an ancillary equipment incorporated in the radio equipment. So this test is not applicable for this EUT.

Remark3: This EUT is just a radio dependent module which is not used in a vehicular environment. So this test is not applicable for this EUT.

2.2 TEST UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted disturbance	3.4
Radiated disturbance	4.2

2.3 TEST EQUIPMENT LIST

3m Semi-anechoic Chamber - Radiated disturbance Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
3m Chamber & Accessory Equipment	ETS-LINDGREN	FACT-3	CT-0000336	2013/11/27
Receiver	Agilent	N9038A	MY51210142	2013/09/28
Biconilog Antenna	SCHWARZBECK	VULB 9160	3316	2013/09/20
Horn Antenna	SCHWARZBECK	BBHA9120D	00057407	2013/09/20
Microwave Preamplifier	EM Electronics	EM30180	3008A02425	2014/03/01

Shielding Room No. 2 - ESD Test (IEC 61000-4-2)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
ESD Simulator	emtest	Dito	DM-1132	2014/02/20

3m Full-anechoic Chamber - RF electromagnetic field Immunity Test (IEC 61000-4-3)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Power Meter	R&S	NRVD	101457	2013/11/05
Signal generators	R&S	SMR20	101440	2013/11/05
Power Amplifier	B&K	BLWA	056186-01	2013/07/21
VHF/UHF EMS Antenna	SCHWARZBECK	HL046E	100008	2013/10/16
Audio Analyzer	R&S	UPV	101184	2014/01/13

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and has been calibrated by accredited calibration laboratories.

2.4 SUPPORT EQUIPMENT

Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Radio Communication Tester	Agilent	E5515C	GB46581718	2013/10/25

2.5 TEST FACILITY

All test facilities used to collect the test data are located at No. 1350, Lianxi Rd. Pudong New District, Shanghai, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4, CISPR 16-1-1 and other equivalent standards. The laboratory is compliance with the requirements of the ISO/IEC/EN 17025.

2.6 IMMUNITY PERFORMANCE CRITERIA

General Requirements (ETSI EN 301489-1):

The performance criteria are used to take a decision on whether a radio equipment passes or fails immunity tests. For the purpose of the present document four categories of performance criteria apply:

- performance criteria for continuous phenomena applied to transmitters;
- performance criteria for transient phenomena applied to transmitters;

- performance criteria for continuous phenomena applied to receivers;
- performance criteria for transient phenomena applied to receivers.

Normally, the performance criteria depend on the type of radio equipment. Thus, the present document only contains general performance criteria commonly used for the assessment of radio equipment. More specific and product-related performance criteria for a dedicated type of radio equipment may be found in the part of EN 301 489 series [i.13] dealing with the particular type of radio equipment.

(1) Performance criteria for continuous phenomena applied to transmitters and receivers

If no further details are given in the relevant part of EN 301 489 series [i.13] dealing with the particular type of radio equipment, the following general performance criteria for continuous phenomena shall apply. During and after the test, the apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a permissible performance level specified by the manufacturer when the apparatus is used as intended. In some cases this permissible performance level may be replaced by a permissible loss of performance. During the test the EUT shall not unintentionally transmit or change its actual operating state and stored data. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be deduced from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

(2) Performance criteria for transient phenomena applied to transmitters and receivers

If no further details are given in the relevant part of EN 301 489 series [i.13] dealing with the particular type of radio equipment, the following general performance criteria for transient phenomena shall apply. After the test, the apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a permissible performance level specified by the manufacturer, when the apparatus is used as intended. In some cases this permissible performance level may be replaced by a permissible loss of performance. During the EMC exposure to an electromagnetic phenomenon, a degradation of performance is, however, allowed. No change of the actual mode of operation (e.g. unintended transmission) or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be deduced from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

(3) Performance criteria for equipment which does not provide a continuous communication link

For radio equipment which does not provide a continuous communication link, the performance criteria described in clauses 6.1 and 6.2 are not appropriate, then the manufacturer shall declare, for inclusion in the test report, his own specification for an acceptable level of performance or degradation of performance during and/or after the immunity tests. The performance specification shall be included in the product description and documentation. The related specifications set out in clause 5.3 have also to be taken into account. The performance criteria specified by the manufacturer shall give the same degree of immunity protection as called for in clauses 6.1 and 6.2.

(4) Performance criteria for ancillary equipment tested on a stand alone basis

If ancillary equipment is intended to be tested on a stand alone basis, the performance criteria described in clauses 6.1 and 6.2 are not appropriate, then the manufacturer shall declare, for inclusion in the test report, his own specification for an acceptable level of performance or degradation of performance during and/or after the immunity tests. The performance specification shall be included in the product description and documentation. The related specifications set out in clause 5.3 have also to be taken into account. The performance criteria specified by the manufacturer shall give the same degree of immunity protection as called for in clauses 6.1 and 6.2.

General Requirements (ETSI EN 301489-7):

The establishment and maintenance of a communications link, the assessment of RXQUAL, and the assessment of the audio breakthrough by monitoring the speech output signal level, are used as performance criteria to ensure that all primary functions of the transmitter and receiver are evaluated during the immunity tests. In addition, the test shall also be performed in idle mode to ensure the

transmitter does not unintentionally operate. The maintenance of a communications link shall be assessed using an indicator which may be part of the test system or the EUT.

If an equipment is of a specialized nature, such that the performance criteria described in the following clauses are not appropriate, then the manufacturer shall declare, for inclusion in the test report, his own specification for an acceptable level of performance or degradation of performance during and/or after the immunity tests. The performance specification shall be included in the product description and documentation.

The performance criteria specified by the manufacturer shall give the same degree of immunity protection as called for in the following clauses.

Product Standard	Clause 6.1 to 6.5 of ETSI EN301489-7
CT	During the test, the uplink speech output level shall be at least 35 dB less than the previously recorded reference levels, when measured through an audio band pass filter of width 200 Hz, centred on 1 kHz (audio breakthrough check). NOTE: When there is a high level background noise present the filter bandwidth can be reduced down to a minimum of 40 Hz. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data, and the communication link shall have been maintained. In addition to confirming the above performance during a call, the test shall also be performed in idle mode, and the transmitter shall not unintentionally operate.
TT	At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communication link. At the conclusion of the total test comprising the series of individual exposures, the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communication link shall have been maintained. In addition to confirming the above performance during a call, the test shall also be performed in idle mode, and the transmitter shall not unintentionally operate.
CR	During the test, the RXQUAL of the downlink shall not exceed the value of three, measured during each individual exposure in the test sequence. During the test, the downlink speech output level shall be at least 35 dB less than the previously recorded reference levels, when measured through an audio band pass filter of width 200 Hz, centred on 1 kHz (audio breakthrough check). NOTE: When there is a high level background noise present the filter bandwidth can be reduced down to a minimum of 40 Hz. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data, and the communication link shall have been maintained.
TR	At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communication link. At the conclusion of the total test comprising the series of individual exposures, the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communication link shall have been maintained.
Ancillary equipment tested on a stand alone basis	The provision of EN 301 489-1 [1], clause 6.4 shall apply.

Special conditions for EMC immunity tests

Reference to clauses in EN 301 489-1 [1]	Special product-related conditions, additional to or modifying the test conditions in EN 301 489-1 [1], clause 9
9.2 Radio frequency electromagnetic field 9.2.2 Test method;	When using the max hold detector method (see annex B) at each test frequency step initially an unmodulated test signal shall be applied. Then the test modulation shall be applied. The test shall be repeated with the equipment in the idle mode of operation and the exclusion band shall not be used during this test.
9.5 Radio frequency, common mode	When using the max hold detector method (see annex B) at each test frequency step initially an unmodulated test signal shall be applied. Then the test modulation shall be applied.
9.5.2 Test method	The stepped frequency increments may be 50 kHz increment of the momentary frequency in the frequency range 150 kHz to 5 MHz. When using the max hold detector method, initially at each test frequency step an unmodulated immunity test signal shall be applied. Then the modulation of the immunity RF test signal (1 kHz tone) shall be applied as specified in the EN 301 489-1 [1].
9.6.3 Performance criteria	During tests with pulses 3a and 3b, the performance criteria TT shall apply, see clause 6.2.
9.7.3 Performance criteria; Voltage dips and interruptions	For a voltage dip corresponding to a reduction of the supply voltage of 30 % for 10 ms the performance criteria TT or CR specified In clauses 6.2 or 6.3 shall apply as appropriate.

2.7 TEST SETUP CONFIGURATION

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

Notes:

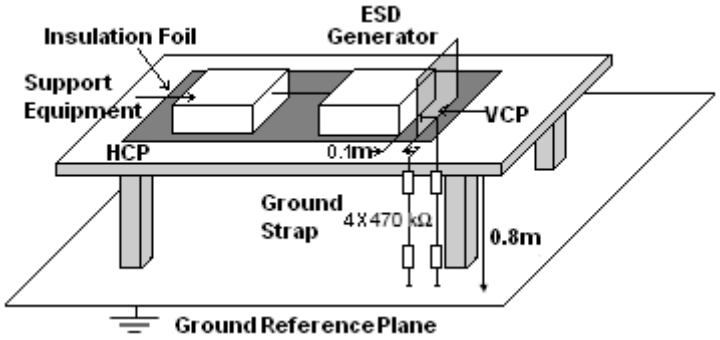
1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. All the tests were carried out with the EUT in normal operation. Which was shown in this test report is the worst test mode

3. ELECTROSTATIC DISCHARGE (ESD)

3.1 TEST SPECIFICATION

Basic Standard	:	EN 61000-4-2
Test Port	:	Enclosure port
Discharge Impedance	:	330 ohm / 150 pF
Discharge Mode	:	Single Discharge
Discharge Period	:	one second between each discharge

3.2 TEST SETUP



3.3 TEST PROCEDURE

The test applied a non-conductive surface and a horizontal coupling plane on a wooden table, 0.8 m high, standing on the reference ground plane, which is a 3 m x 4 m metallic sheet with 1.5 mm thickness. This reference ground plane projected beyond the EUT by at least 0.5 m on all sides and the minimum distance between the EUT and all other conductive structure, except the ground plane beneath the EUT, was more than 1.0 m.
ESD shall be applied only to those points and surfaces of the EUT which are expected to be touched during usual operation, including user access, as specified in the user manual.

The discharges shall be applied in the following:

A. Contact discharge (Tests shall be performed at a maximum repetition rate of one discharge per second.):
a. Direct discharge:
The tip of the discharge electrode should touch the EUT, before the discharge switch was operated. The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points (a minimum of 50 discharges at each point). One of the test points shall be subjected to at least 50 indirect discharges (contact) to the center of the front edge of the horizontal coupling plane. If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode (use of the Vertical Coupling Plane)
b. Indirect discharge:
b1. Horizontal Coupling Plane (HCP): More than 50 single discharges were applied at the front edge of each HCP opposite the center point of the EUT and 0.1m from vertically the front of the EUT. Discharge to the HCP was made horizontal to the edge of the HCP.

b2. Vertical Coupling Plane (VCP): More than 50 single discharges were applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5 m x

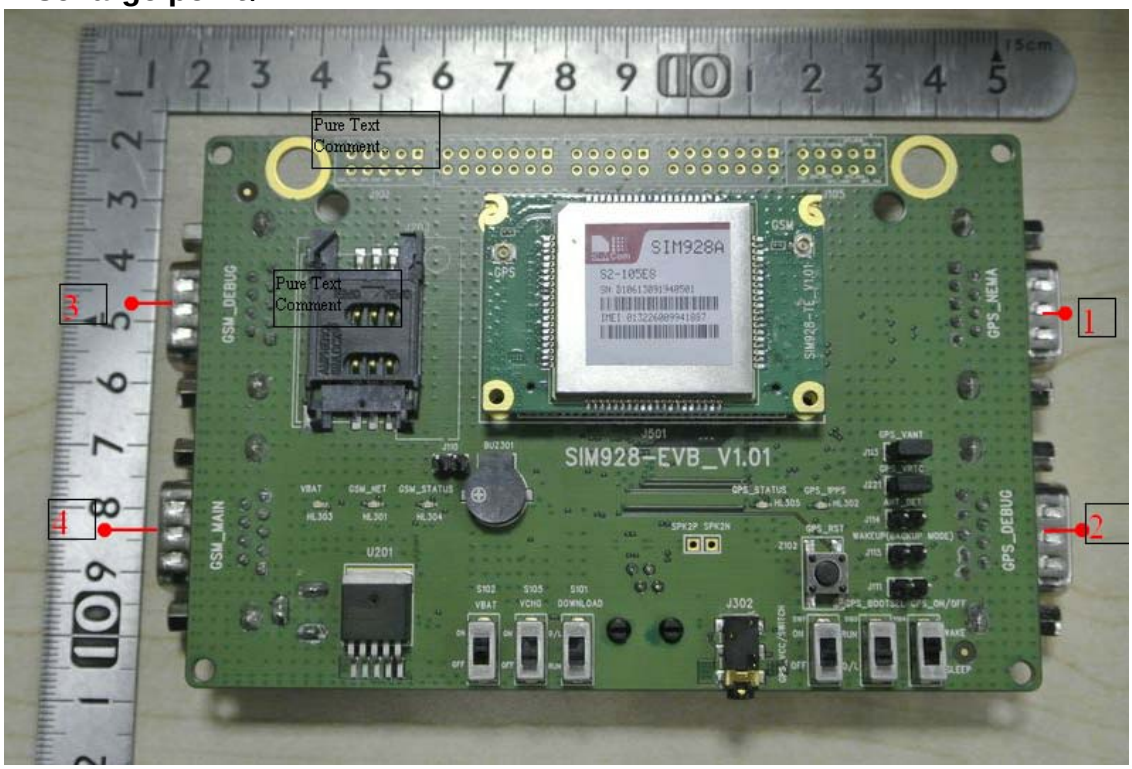
0.5 m, was placed parallel to, and positioned at a distance of 0. m from the EUT. Discharges were applied to the coupling plane, with this plane in sufficient different positions that all sides of the EUT were completely illuminated.

B. Air discharge at slots and apertures, and insulating surfaces:

On those parts of the EUT where it is not possible to perform contact discharge testing, the equipment should be investigated to identify user accessible points where breakdown may occur. Such points are tested using the air discharge method. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the ESD simulator (discharge electrode) was removed from the EUT. The simulator was then re-trigged for a new single discharge and applies more than 10 times on each reselected point. This procedure was repeated until the air discharge completed.

3.4 RESULTS & PERFORMANCE

Discharge point：



EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	23℃
Mode	:	GSM900Traffic	**Humidity**	:	53%

Contact discharge (Direct discharge)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
1,2,3,4	2,4	25	PASS

Contact discharge (HCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

Contact discharge (VCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	23℃
Mode	:	DCS1800Traffic	**Humidity**	:	53%

Contact discharge (Direct discharge)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
1,2,3,4	2,4	25	PASS

Contact discharge (HCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

Contact discharge (VCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	23℃
Mode	:	GSM900Idle	**Humidity**	:	53%

Contact discharge (Direct discharge)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
1,2,3,4	2,4	25	PASS

Contact discharge (HCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

Contact discharge (VCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	23℃
Mode	:	DCS1800Idle	**Humidity**	:	53%

Contact discharge (Direct discharge)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
1,2,3,4	2,4	25	PASS

Contact discharge (HCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

Contact discharge (VCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	23℃
Mode	:	GPS(1575.42MHz)	**Humidity**	:	53%

Contact discharge (Direct discharge)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
1,2,3,4	2,4	25	PASS

Contact discharge (HCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

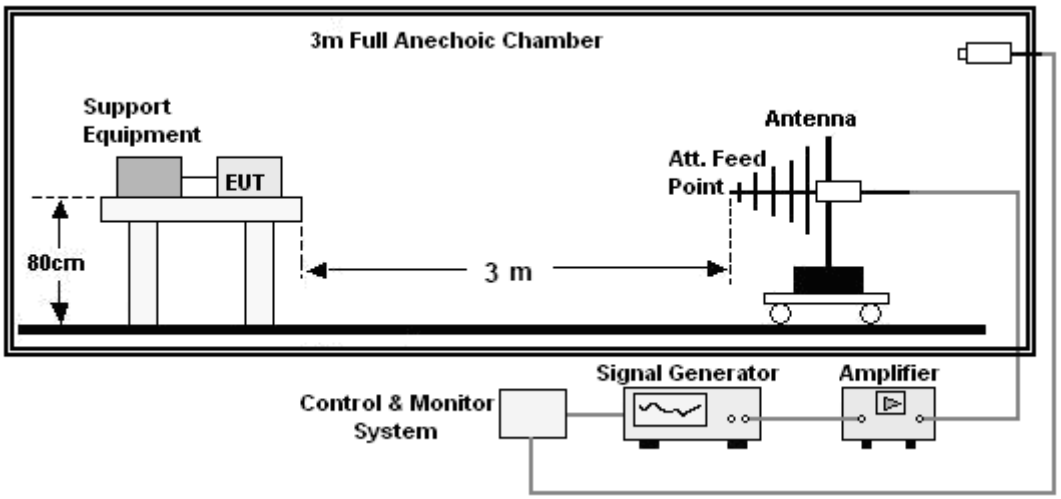
Contact discharge (VCP)			
Test location	Test level (±kV)	Minimum number of discharge per polarity (each location)	Result
Front	2,4	25	PASS
Rear	2,4	25	PASS
Left	2,4	25	PASS
Right	2,4	25	PASS

4. RF ELECTROMAGNETIC FIELD IMMUNITY

4.1 TEST SPECIFICATION

Basic Standard	:	EN 61000-4-3
Test Port	:	Enclosure port
Step Size	:	1%
Modulation	:	1kHz, 80% AM
Dwell Time	:	1 second
Polarization	:	Horizontal & Vertical

4.2 TEST SETUP



4.3 TEST PROCEDURE

a. The EUT and support equipment were placed on the non-conductive table 0.8m above the ground plane at a fully-anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT and support equipment.

b. The frequency range is swept from 80MHz to 1000MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5×10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1%. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.

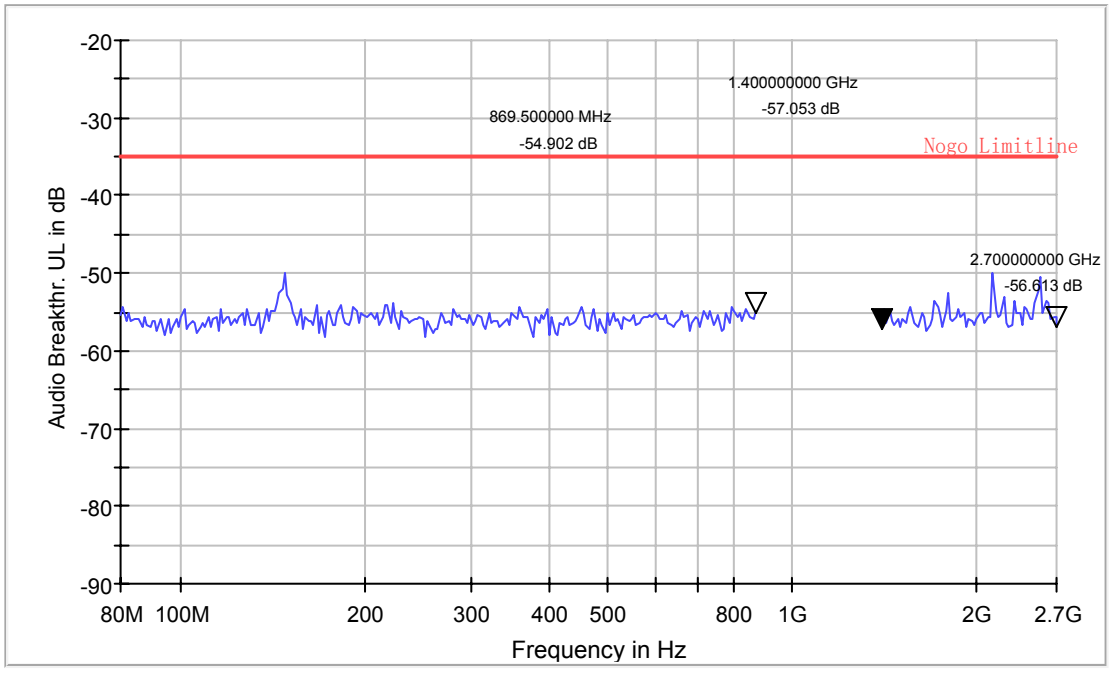
c. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each side. A CCD camera was put inside the chamber and through its display to monitor the operational situation of the EUT to judge the EUT performance criterion during test.

4.4 RESULTS & PERFORMANCE

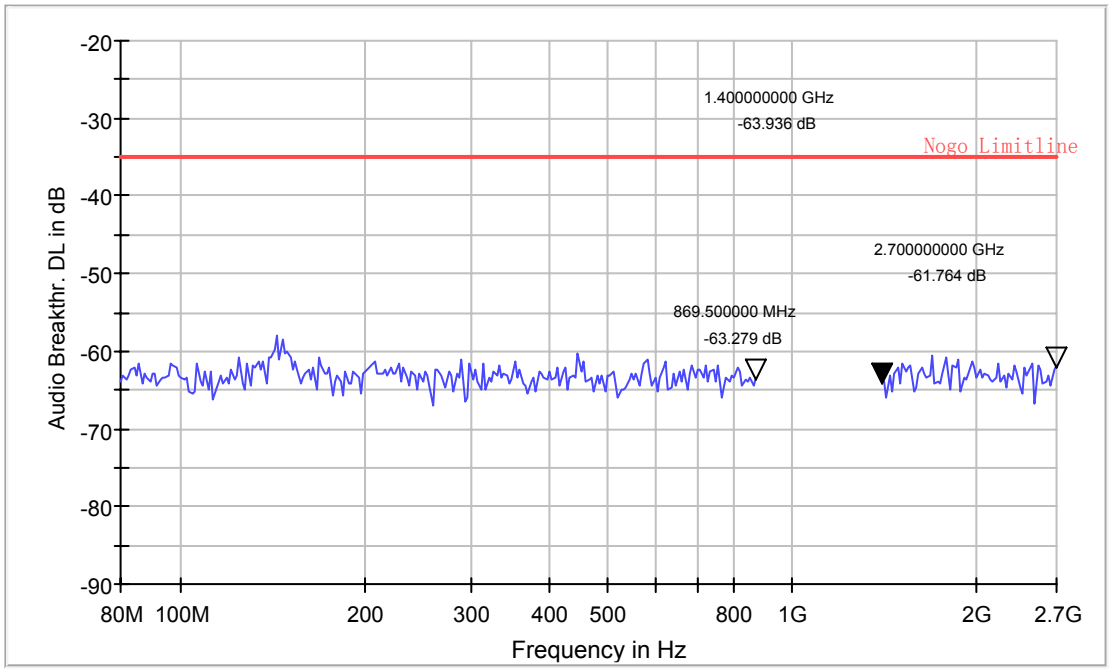
EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	22℃
Mode	:	GSM900Traffic(80M-1G&1.4G-2.7G)	**Humidity**	:	51%

Horizontal

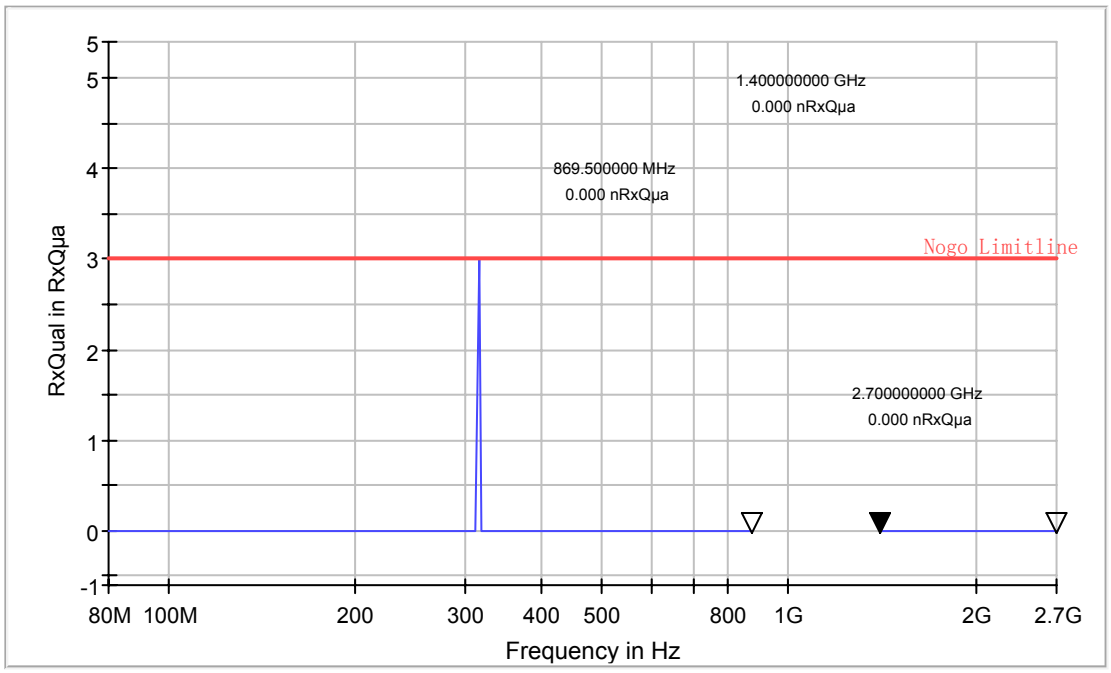
Audio Breakthr. UL



Audio Breakthr. DL

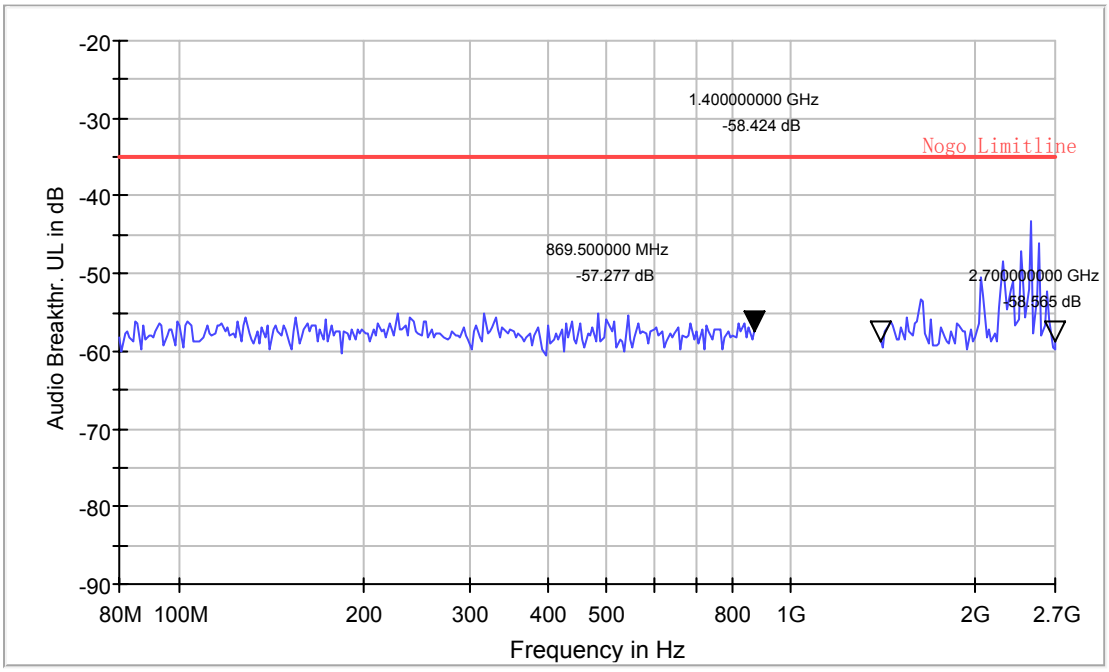


RxQual

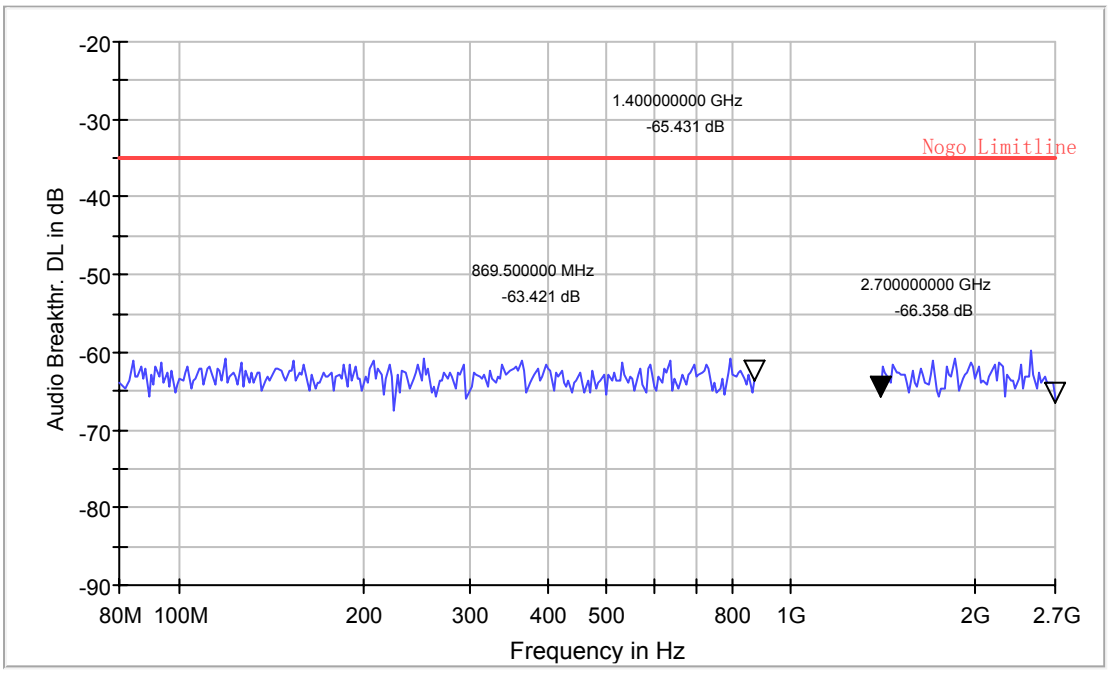


Vertical

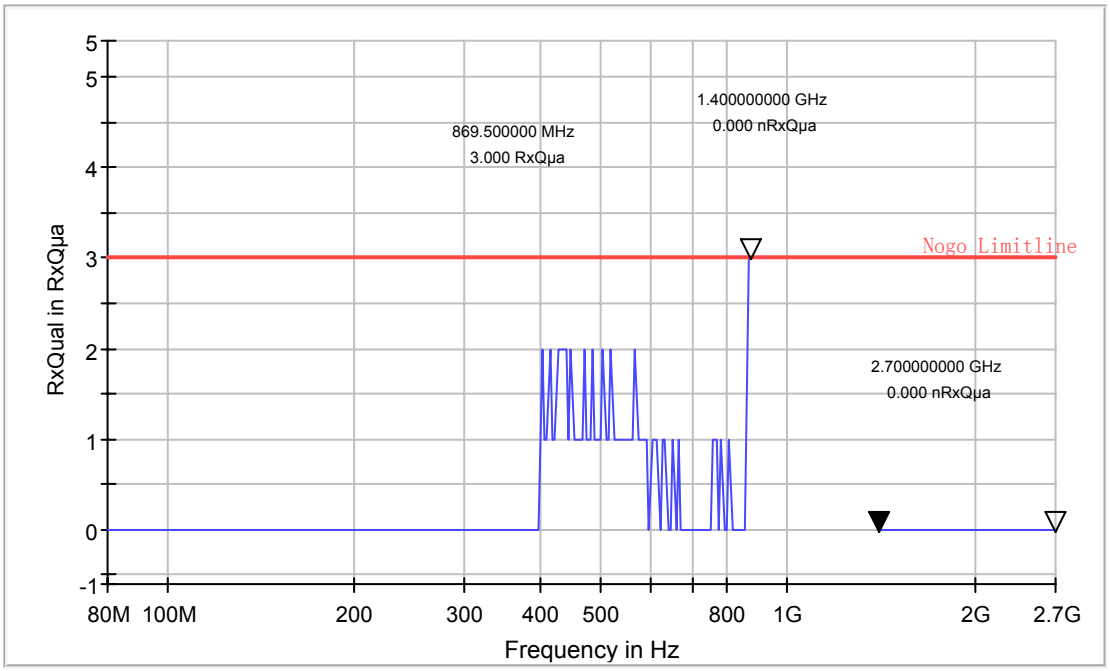
Audio Breakthr. UL



Audio Breakthr. DL



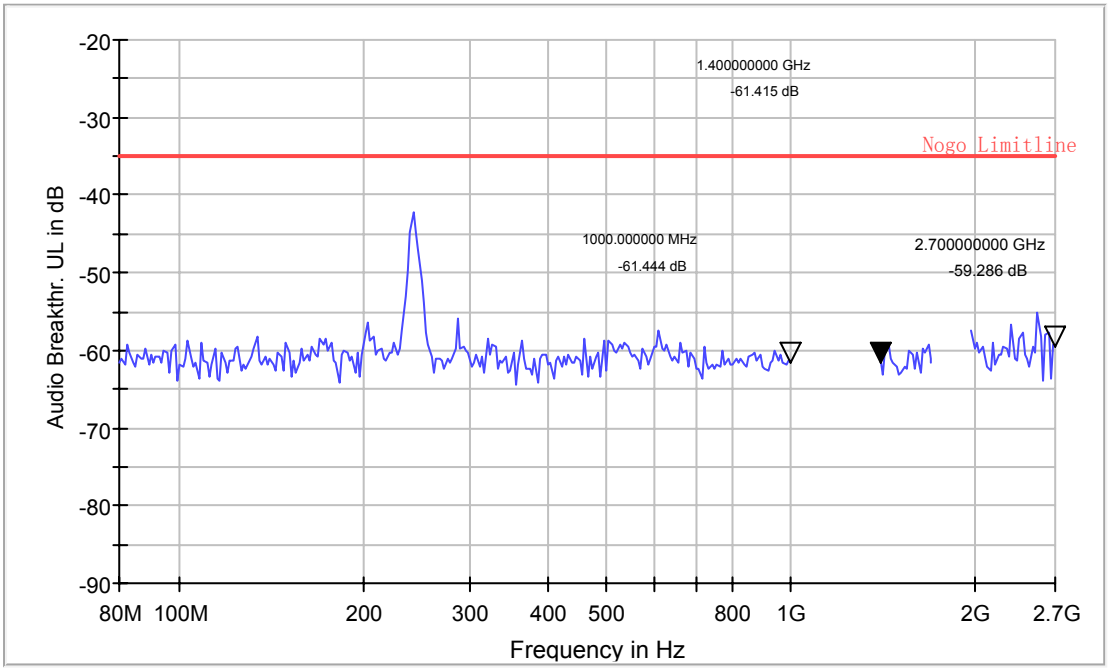
RxQual



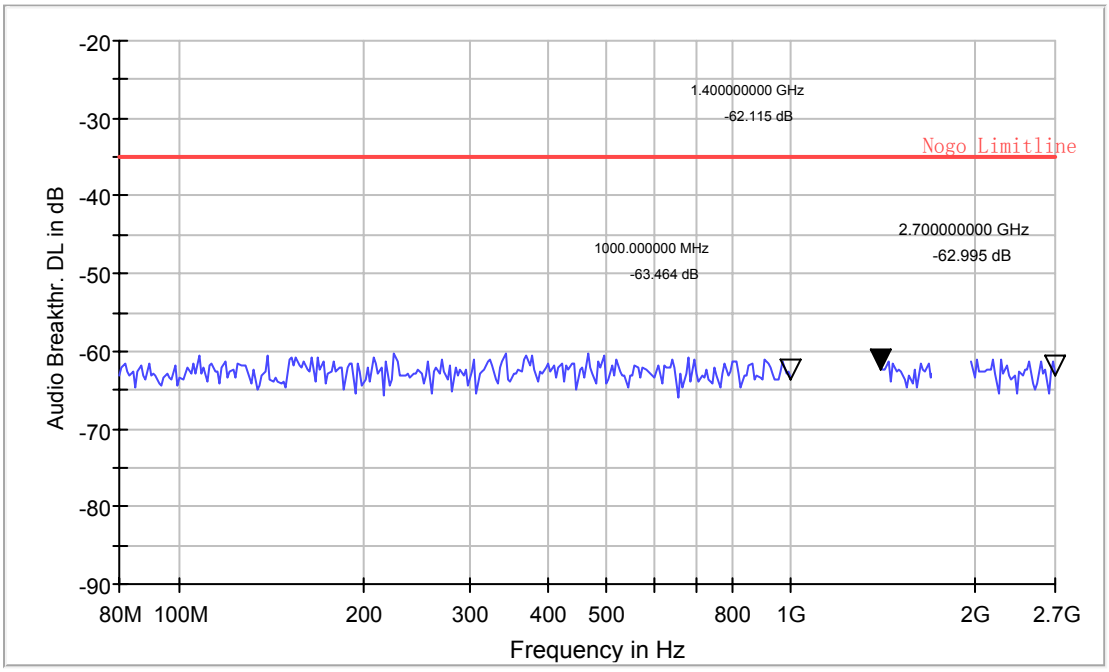
EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	22℃
Mode	:	DCS1800Traffic(80M-1G&1.4G-2.7G)	**Humidity**	:	51%

Horizontal

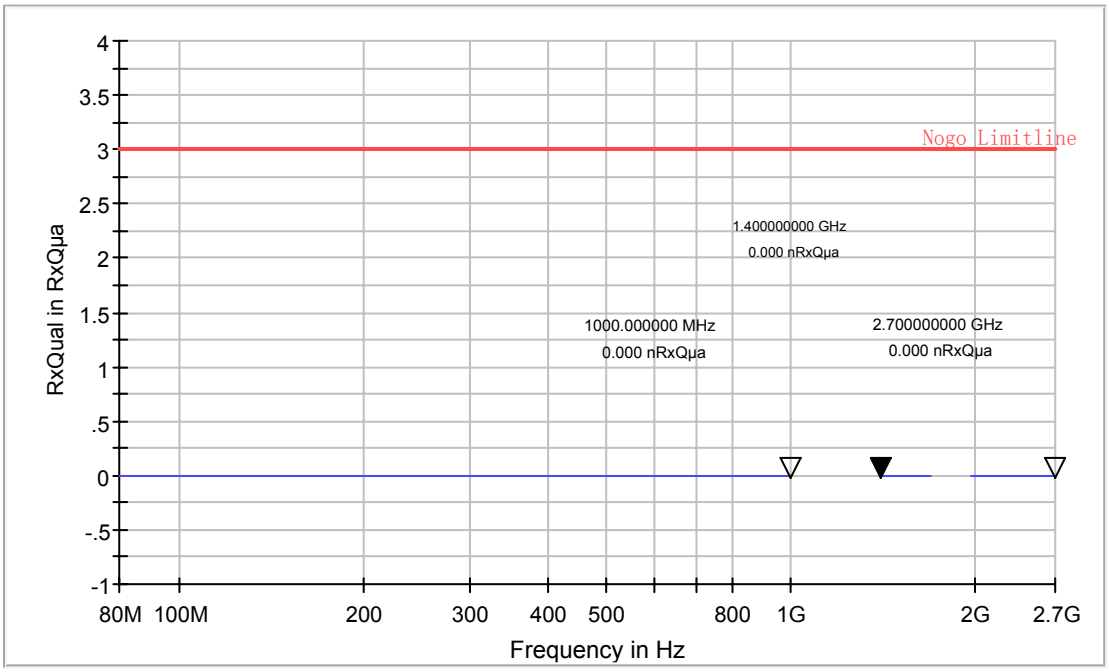
Audio Breakthr. UL



Audio Breakthr. DL

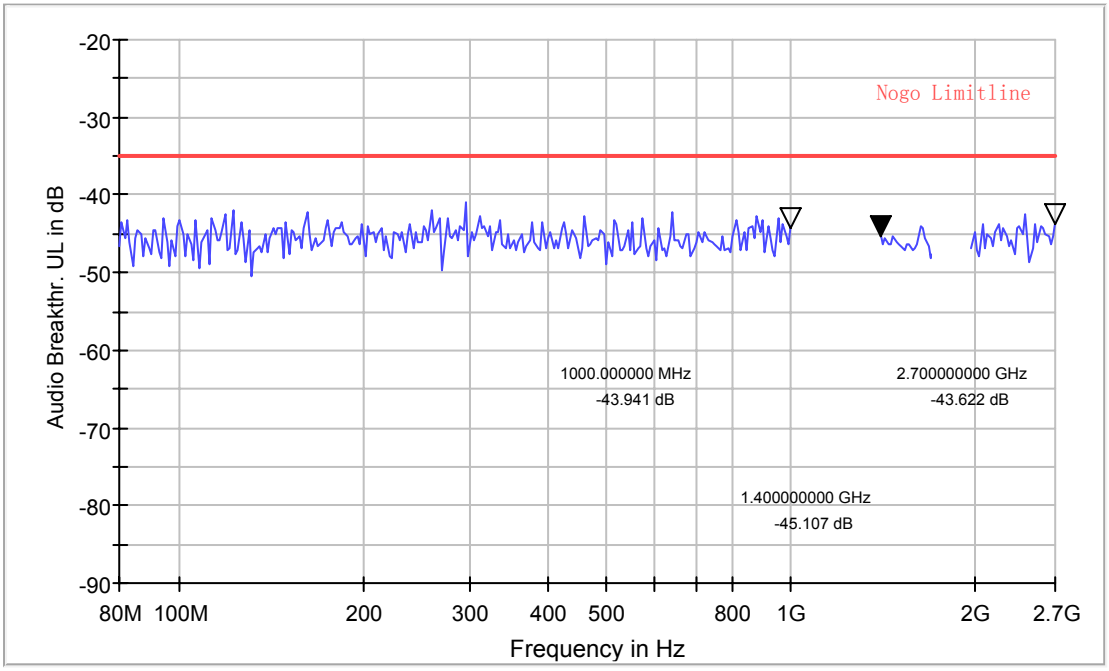


RxQual

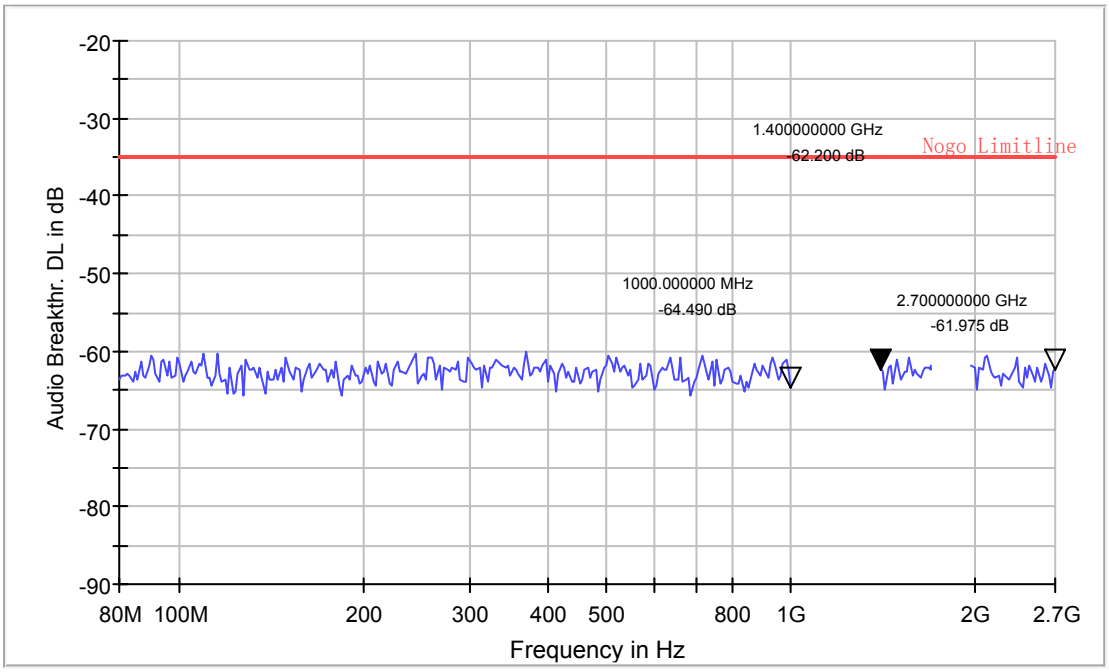


Vertical

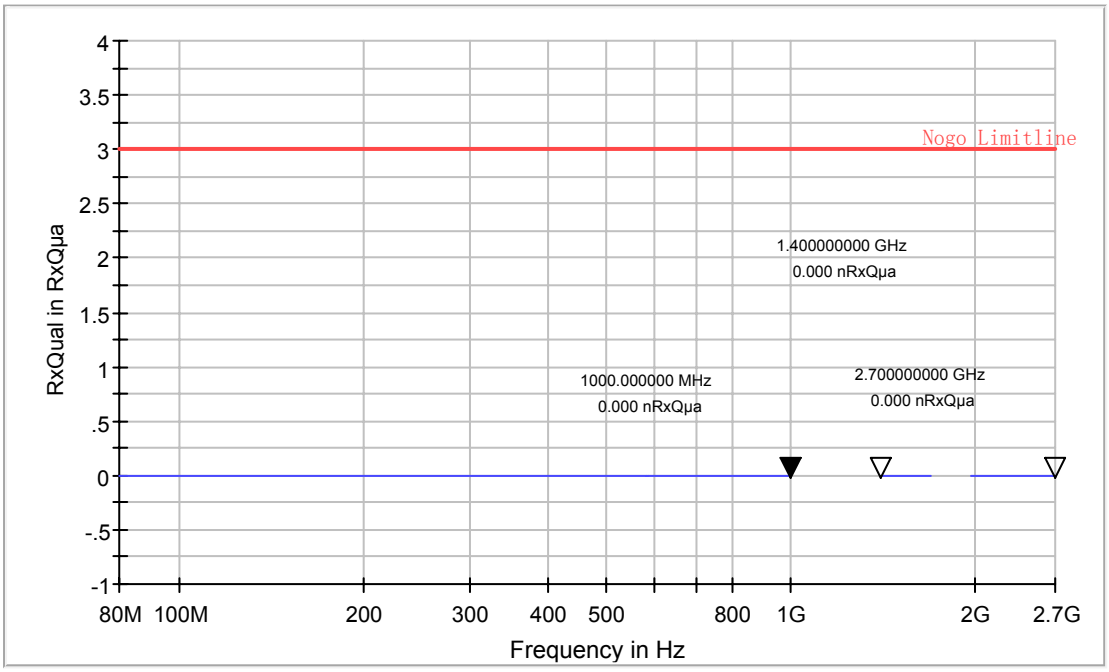
Audio Breakthr. UL



Audio Breakthr. DL



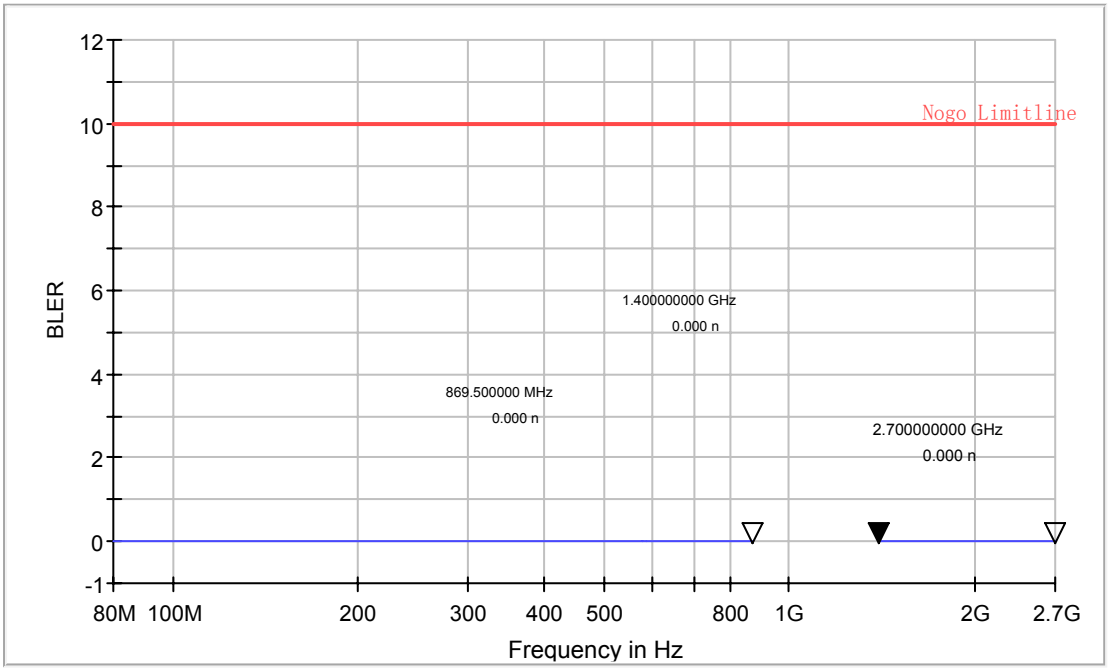
RxQual



EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	22℃
Mode	:	GPRS900Traffic(80M-1G&1.4G-2.7G)	**Humidity**	:	51%

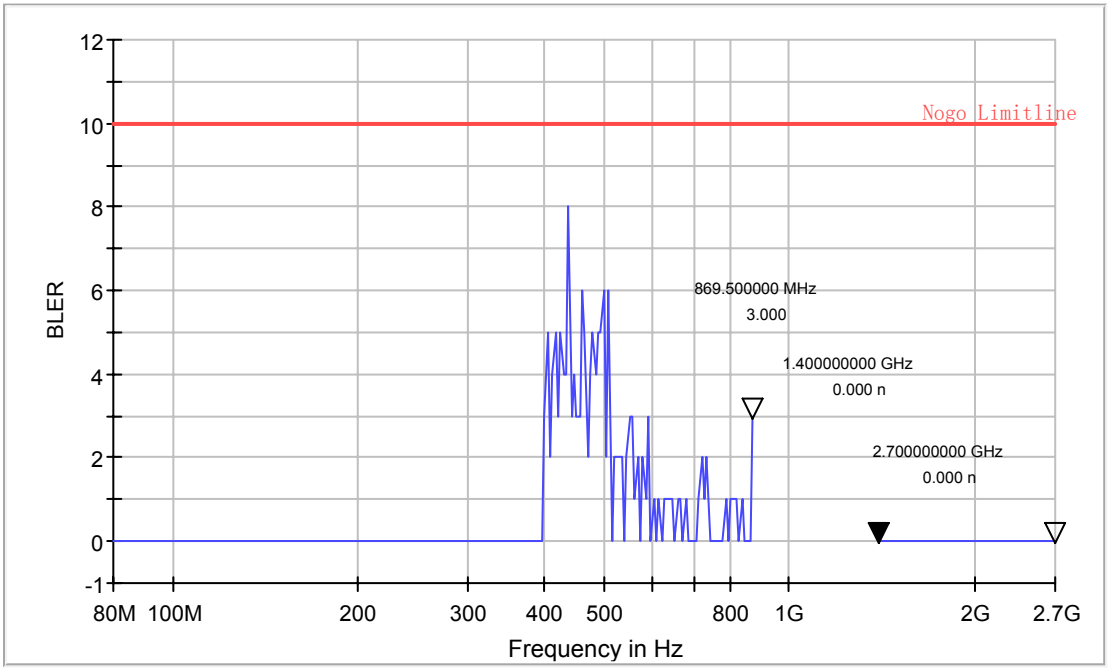
Horizontal

BLER



Vertical

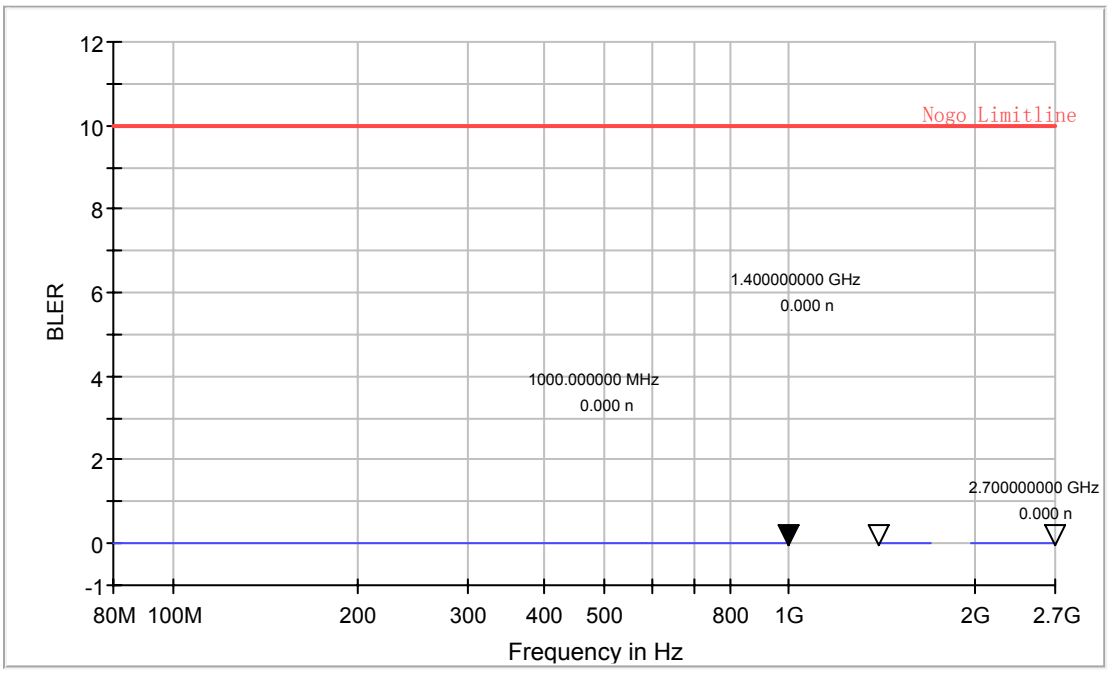
BLER



EUT	:	GSM/GPS Module	**M/N**	:	SIM928A
Power	:	DC 3.8V	**Temperature**	:	22℃
Mode	:	GPRS1800Traffic(80M-1G&1.4G-2.7G)	**Humidity**	:	51%

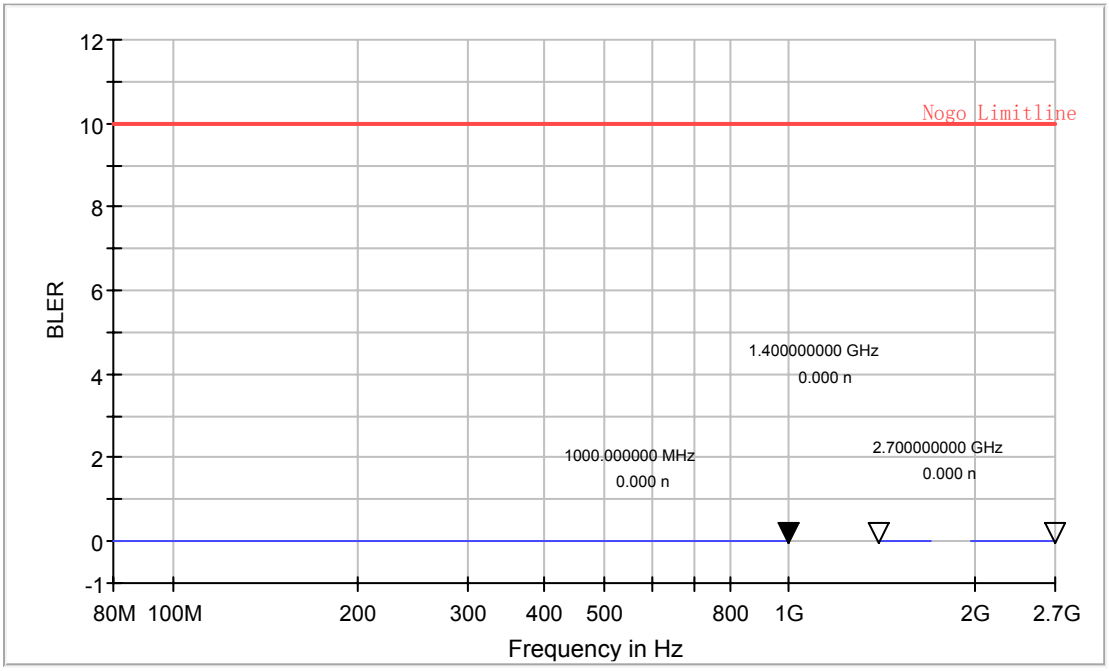
Horizontal

BLER



Vertical

BLER



Power : DC 3.8V **Temperature** : 22℃
Mode : GSM900Idle(80M-1G&1.4G-2.7G) **Humidity** : 51%

Frequency (MHz)	EUT Position	Antenna Polarization	Field Strength (V/m)	Result
80 – 1000 1400-2700	Front	Horizontal	3	PASS
80 – 1000 1400-2700	Front	Vertical	3	PASS
80 – 1000 1400-2700	Rear	Horizontal	3	PASS
80 – 1000 1400-2700	Rear	Vertical	3	PASS
80 – 1000 1400-2700	Left	Horizontal	3	PASS
80 – 1000 1400-2700	Left	Vertical	3	PASS
80 – 1000 1400-2700	Right	Horizontal	3	PASS
80 – 1000 1400-2700	Right	Vertical	3	PASS
80 – 1000 1400-2700	Floor	Horizontal	3	PASS
80 – 1000 1400-2700	Floor	Vertical	3	PASS
80 – 1000 1400-2700	Top	Horizontal	3	PASS
80 – 1000 1400-2700	Top	Vertical	3	PASS

Power : DC 3.8V **Temperature** : 22℃
Mode : GSM1800Idle(80M-1G&1.4G-2.7G) **Humidity** : 51%

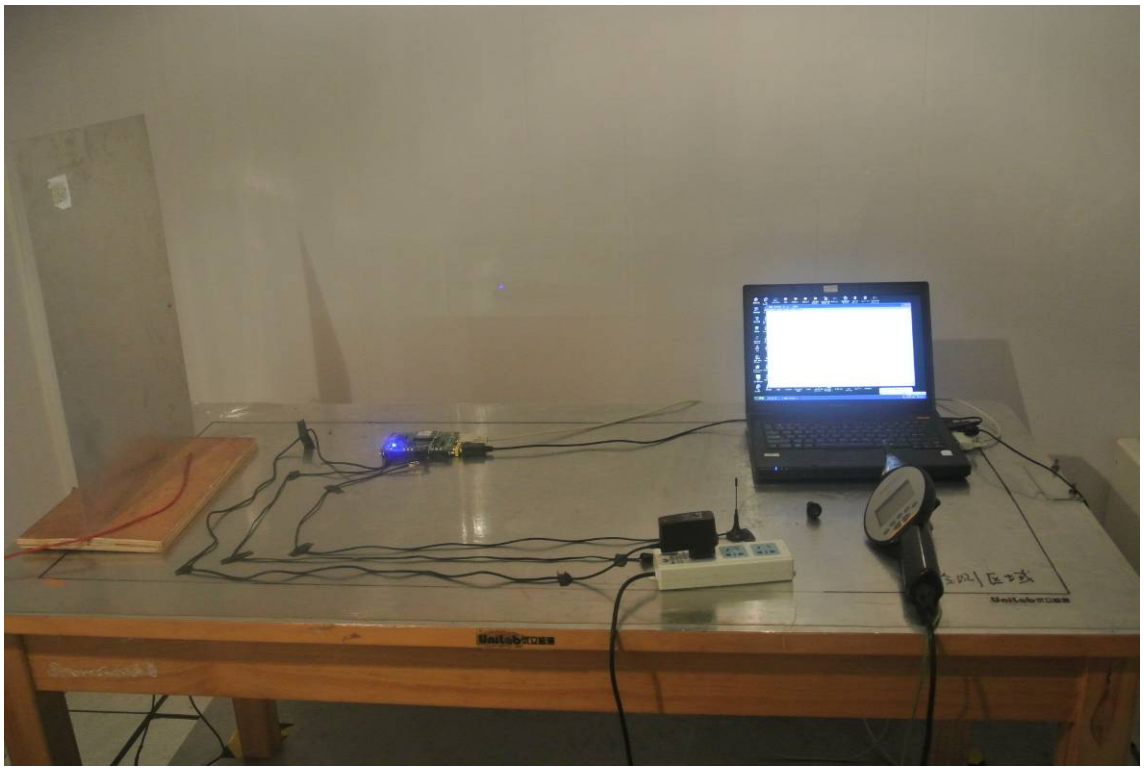
Frequency (MHz)	EUT Position	Antenna Polarization	Field Strength (V/m)	Result
80 – 1000 1400-2700	Front	Horizontal	3	PASS
80 – 1000 1400-2700	Front	Vertical	3	PASS
80 – 1000 1400-2700	Rear	Horizontal	3	PASS
80 – 1000 1400-2700	Rear	Vertical	3	PASS
80 – 1000 1400-2700	Left	Horizontal	3	PASS
80 – 1000 1400-2700	Left	Vertical	3	PASS
80 – 1000 1400-2700	Right	Horizontal	3	PASS
80 – 1000 1400-2700	Right	Vertical	3	PASS
80 – 1000 1400-2700	Floor	Horizontal	3	PASS
80 – 1000 1400-2700	Floor	Vertical	3	PASS
80 – 1000 1400-2700	Top	Horizontal	3	PASS
80 – 1000 1400-2700	Top	Vertical	3	PASS

EUT	**:**	GSM/GPS Module	**M/N**	**:**	SIM928A
Power	**:**	DC 3.8V	**Temperature**	**:**	22℃
Mode	**:**	GPS(1575.42MHz)	**Humidity**	**:**	51%

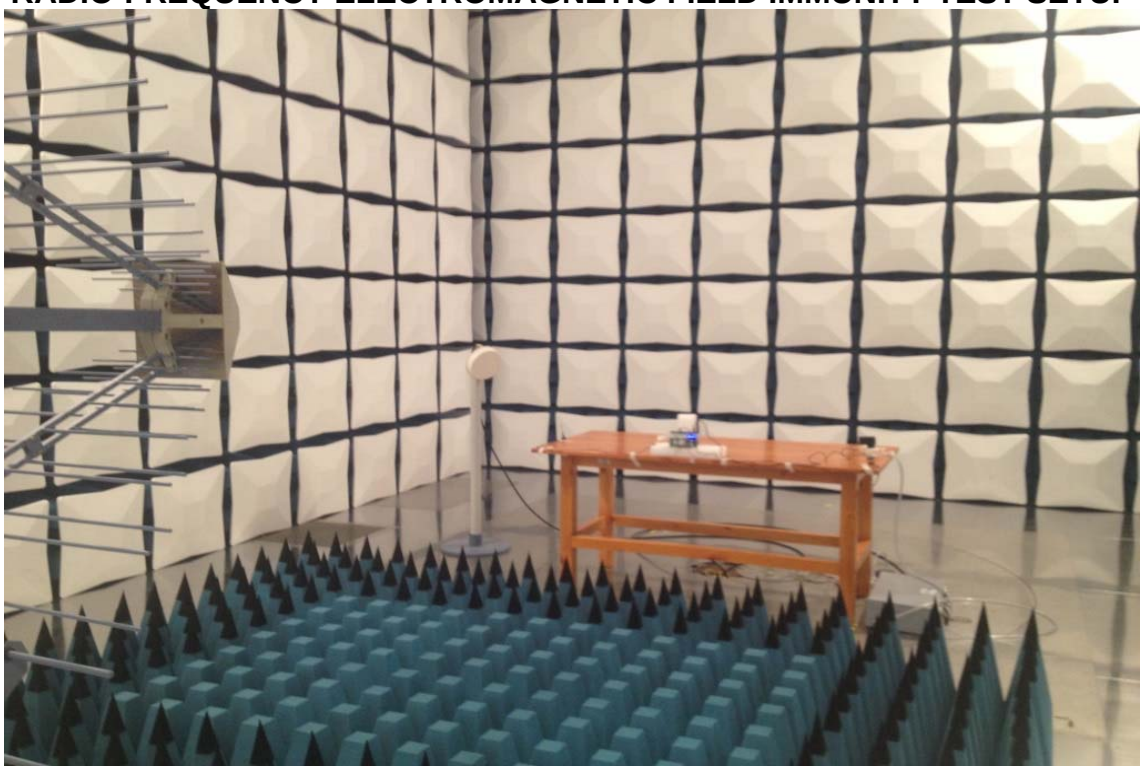
Frequency (MHz)	EUT Position	Antenna Polarization	Field Strength (V/m)	Result
80 – 1000 1400-2700	Front	Horizontal	3	PASS
80 – 1000 1400-2700	Front	Vertical	3	PASS
80 – 1000 1400-2700	Rear	Horizontal	3	PASS
80 – 1000 1400-2700	Rear	Vertical	3	PASS
80 – 1000 1400-2700	Left	Horizontal	3	PASS
80 – 1000 1400-2700	Left	Vertical	3	PASS
80 – 1000 1400-2700	Right	Horizontal	3	PASS
80 – 1000 1400-2700	Right	Vertical	3	PASS
80 – 1000 1400-2700	Floor	Horizontal	3	PASS
80 – 1000 1400-2700	Floor	Vertical	3	PASS
80 – 1000 1400-2700	Top	Horizontal	3	PASS
80 – 1000 1400-2700	Top	Vertical	3	PASS

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

ESD TEST SETUP



RADIO-FREQUENCY ELECTROMAGNETIC FIELD IMMUNITY TEST SETUP

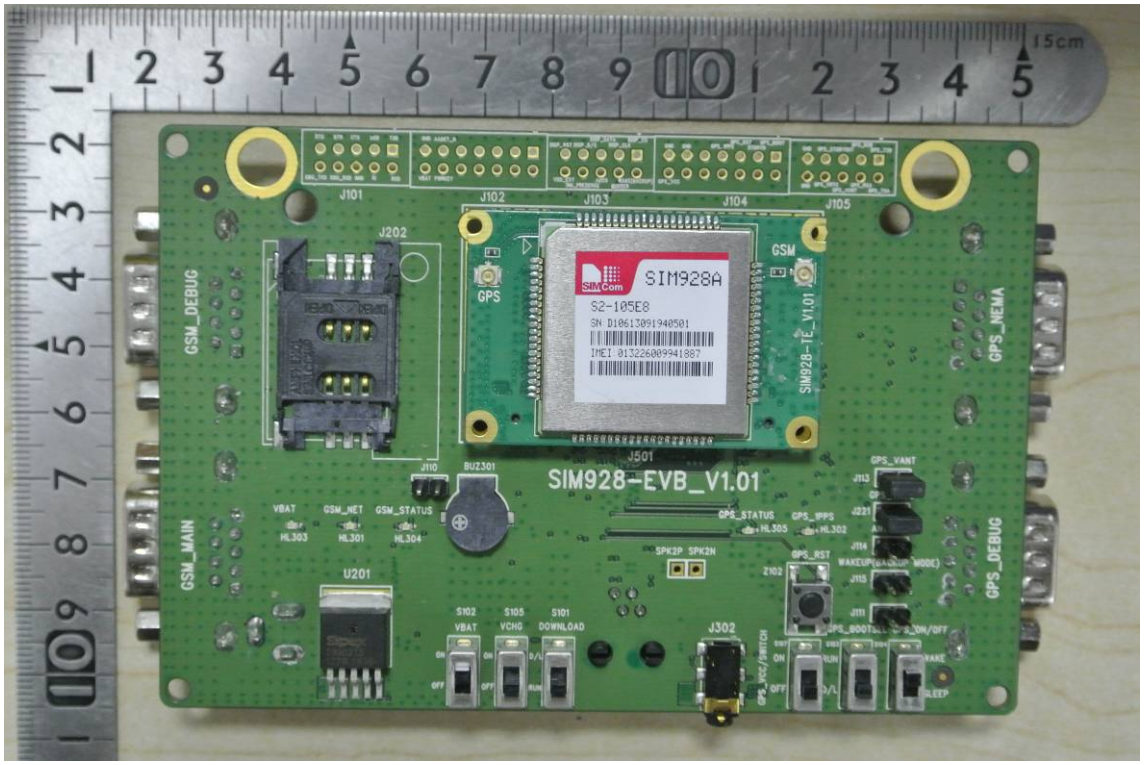


APPENDIX 2 PHOTOGRAPHS OF EUT

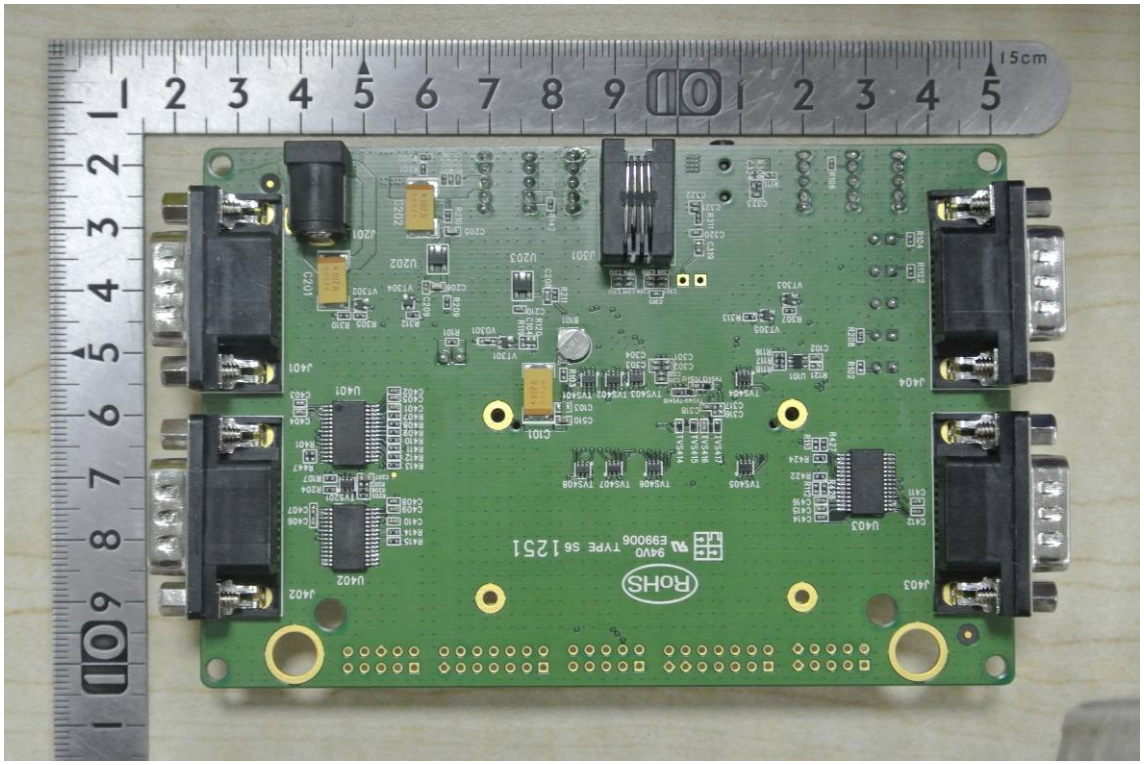
View of EUT-1

View of EUT-2

View of EUT-3



View of EUT-4



----End of the report----